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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
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GROSSMAN, TUCKER, PERREAULT & PFLEGER, PLLC
C/O PORTFOLIO IP
P. O. BOX 52050
MINNEAPOLIS, MN 55402

EXAMINER

RAHMAN, FAHMIDA

ART UNIT PAPER NUMBER

2116

DATE MAILED: 10/20/2005

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary	Application No. 10/032,762	Applicant(s) SCHMISSEUR ET AL.	
	Examiner Fahmida Rahman	Art Unit 2116	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 02 June 2005.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-35 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-35 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 01 April 2002 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☒ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. _____.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- * See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|---|---|
| 1) <input type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413)
Paper No(s)/Mail Date. _____ |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152) |
| 3) <input checked="" type="checkbox"/> Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)
Paper No(s)/Mail Date <u>12/26/2001</u> . | 6) <input type="checkbox"/> Other: _____ |

DETAILED ACTION

1. This is responsive to the arguments filed on 6/2/2005.
2. Claims 1-35 are pending.
3. Applicant's arguments with respect to claims 1-35 have been considered but are moot in view of the new ground(s) of rejection.

Continued Examination Under 37 CFR 1.114

A request for continued examination under 37 CFR 1.114 was filed in this application after final rejection. Since this application is eligible for continued examination under 37 CFR 1.114, the finality of the previous Office action has been withdrawn pursuant to 37 CFR 1.114.

Oath/Declaration

The oath or declaration is defective. A new oath or declaration in compliance with 37 CFR 1.67(a) identifying this application by application number and filing date is required. See MPEP §§ 602.01 and 602.02.

The oath or declaration is defective because:
Signature of one inventor Delf Atallah is omitted.

Information Disclosure Statement

The information disclosure statement (IDS) submitted on 12/26/2001 is in compliance with the provisions of 37 CFR 1.97. Accordingly, the information disclosure statement is being considered by the examiner.

Claim Rejections - 35 USC § 102

The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

4. Claims 1-6, 9-12, 15-19, 22-26 and 29-33 are rejected under 35 U.S.C. 102(b) as being anticipated by Anderson (U.S. 5,898,869).

Regarding claim 1, **Anderson discloses a system comprising:**

- **a core processing circuit (13), and**
- **a host processing system (11) coupled to the core processing circuit through a host bridge (17), the host processing system comprising:**
- **logic to maintain the core processing circuit in a reset state (column 2, lines 65-66, column 3, lines 6-7) during power up of the core processing system (lines 4-6 of column 3 mention that the resetting comprises asserting power-on reset signal. In addition, lines 9-11 of column 3 mention that the releasing of the**

suspended processor from reset includes host accessing an address. Thus, the core processing system is maintained in a reset state during power up until released by the host) **and**

- **logic to load a reset vector to one or more registers at a boot address associated with the core processing circuit** (column 6, lines 13-15 in view of column 8, lines 7-9; Anderson discloses the reset vector as comprising an "initial program" which necessarily must be loaded to registers), **the reset vector comprising one or more instructions to fetch additional instructions** (column 8, lines 24-26. Anderson discloses that the boot sequence can include a loader program to download a program from host 11 to FLASH memory, which necessarily must include fetching additional instructions) **to initialize the core processing circuit** (lines 14-16 of column 8 mention that the boot sequence completes the initialization process) **upon release from the reset state** (lines 5-15 of column 6 mention that the booting is performed upon releasing from reset state)

Regarding claim 2, Anderson discloses that the registers are formed in a memory (39) coupled to the core processing circuit (31) through a data bus (26).

Regarding claim 3, Anderson discloses that **the host processing system comprises a system memory (39), and wherein the reset vector comprises at least one**

Art Unit: 2116

instruction to fetch data from a system memory (column 2, line 66 through column 3, line 2) **coupled to the core processing circuit through the host bridge** (17).

Regarding claim 4, Anderson discloses that the **host processing system further comprises logic to set an address translation unit to fetch instructions from the system memory in response to requests from the core processing unit** (column 2, lines 48-50, via processor address bus 24).

Regarding claim 5, Anderson discloses that **the host processing system further comprises logic to initiate one or more write bus transactions** (lines 7-9 of column 8 mention that the host transfers boot code sequence into the memory. Thus, host initiates the write bus transactions) **to load the reset vector in the registers while the core processing circuit is in the reset state** (column 6, lines 5-7), and wherein the **core processing circuit comprises logic to initiate the system memory in response to execution of the reset vector upon release from the reset state** (column 6, lines 13-15). Anderson does not explicitly disclose initiating of one or more write bus transactions at an address translation unit nor one or more read bus transactions at the address translation unit addressed to the system memory, however said transactions would necessarily have to be present in order for the host processing system to properly communicate with the core processing circuit.

Art Unit: 2116

Regarding claim 6, Anderson discloses that **the host processing system further comprises logic to release the core processing circuit from the reset state in response to loading the reset vector at the boot address** (column 2, lines 37-39 and lines 5-11 of column 6).

Regarding claim 9, Anderson discloses a method comprising:

- **having a host processing system (11) maintain a core processing unit (13) in a reset state** (lines 1-5 of column 6 mentioned that the processor 31 is entered and maintained in reset state by asserting HRESET through a hardware/software reset. In addition, lines 9-11 of column 3 mention that the releasing of the suspended processor from reset includes host accessing an address. Thus, the core processing system is maintained in a reset state during power up until released by the host) **during power up of the core processing circuit** (lines 4-6 of column 3 mention that the resetting comprises asserting power-on reset signal. In addition, lines 39-43 of column 7 mention that the reset is asserted during power up of the PCMCIA card. Thus, host maintains the core processing circuit in a reset state during power up of the core processing circuit)
- **and loading a reset vector to one or more registers at a boot address associated with the core processing circuit** (column 6, lines 13-15 in view of column 8, lines 7-9, Anderson discloses the reset vector as comprising an "initial

program," which necessarily must be loaded to registers), **the reset vector comprising one or more instructions to fetch additional instructions from a system memory** (column 8, lines 24-26., Anderson discloses an included loader program to download a program from host 11 to FLASH memory, which necessarily must include fetching additional instructions) **coupled to the core processing circuit through a host bridge (17) of a host processing system (11).**

Regarding claim 10, Anderson **discloses the method comprising loading the reset vector to a boot address in the registers** (column 6, lines 13-15 in view of column 8, lines 7-9; Anderson discloses the reset vector as an "initial program" comprising boot sequences which necessarily must be loaded to registers at a boot location) **are formed in a memory (39) coupled to the core processing circuit (31) through a data bus (26).**

Regarding claim 11, Anderson discloses **the host processing system further comprises logic to set an address translation unit to fetch instructions from the system memory in response to requests from the core processing unit** (column 2, lines 48-50, via processor address bus 24).

Regarding claim 12, Anderson discloses the system of claim 3, wherein the host processing system further comprises logic to initiate one or more write bus transactions

Art Unit: 2116

(lines 7-9 of column 8 mention that the host transfers boot code sequence into the memory. Thus, host initiates the write bus transactions) to load the reset vector in the registers while the core processing circuit is in the reset state (column 6, lines 5-7), and wherein the core processing circuit comprises logic to initiate the system memory in response to execution of the reset vector upon release from the reset state (column 6, lines 13-15). Anderson does not explicitly disclose initiating of one or more write bus transactions at an address translation unit nor one or more read bus transactions at the address translation unit addressed to the system memory, however said transactions would necessarily have to be present in order for the host processing system to properly communicate with the core processing circuit.

Regarding claim 15, Anderson discloses a method comprising:

- **having a host processing system (11) maintain a core processing unit (13) in a reset state** (lines 1-5 of column 6 mentioned that the processor 31 is entered and maintained in reset state by asserting HRESET through a hardware/software reset. In addition, lines 9-11 of column 3 mention that the releasing of the suspended processor from reset includes host accessing an address. Thus, the core processing system is maintained in a reset state during power up until released by the host) **during power up of the core processing circuit** (lines 4-6 of column 3 mention that the resetting comprises asserting power-on reset signal. In addition, lines 39-43 of column 7 mention that the reset

is asserted during power up of the PCMCIA card. Thus, host maintains the core processing circuit in a reset state during power up of the core processing circuit)

- **and loading instructions from a system memory of a host processing system to one or more registers at a boot address associated with the core processing circuit** (column 6, lines 5-15 in view of column 8, lines 7-9*, Anderson discloses the "initial program" comprising boot code sequences loaded in the core processing circuit, which must necessarily be loaded to registers. In addition, 115 of Fig 5 shows that the host loads the program to the memory of core. Thus, Anderson discloses loading instructions from a system memory of a host processing system to one or more registers at a boot address associated with the core processing circuit), **the instructions comprising one or more instructions to initialize the core processing circuit upon release of the core processing circuit from the reset state** (lines 5-12 of column 6 mention that the START* by host causes the latch output 61 high, which in turn causes the processor to leave the reset state. These operations are shown in step 117 and 119 in Fig 5. After setting the flip-flop, processor begins booting or initialization as shown in step 121 of Fig 5. Thus, the instructions initialize the core processing circuit upon release of the core processing circuit from the reset state).

Art Unit: 2116

Regarding claim 16, Anderson discloses that **the method further comprises transmitting the instructions from the system memory** (lines 66-67 of column 2 mention that the PCMCIA downloads code from host) **through a host bridge (17) of the host processing system (11).**

Regarding claim 17, Anderson discloses **the method further comprising releasing the core processing circuit from the reset state in response to loading the instructions at the boot address** (column 6, lines 5-12 mention that the processor leaves reset state after the memory is loaded with boot code. In addition, lines 38-39 of column 2 mention that boot logic is configured to release the suspended processor. Thus, the releasing of processor from the reset state is in response to loading the instructions at the boot address).

Regarding claim 18, Anderson discloses the method further comprising **loading the instructions to a boot address** (lines 10-15 of column 6) **in registers formed in a memory (39) coupled to the core processing circuit (31) through a data bus (26).**

Regarding claim 19, Anderson discloses **the method further comprises setting an address translation unit to fetch instructions from the system memory in response to requests from the core processing circuit** (column 2, lines 48-50, via processor address bus 24).

Regarding claim 22, Anderson discloses **an article comprising:**

- **a storage medium comprising machine-readable instructions encoded there on for** (there must be a storage media to store the instructions necessary to execute the disclosed methods of Anderson):
- **having a host processing system (11) maintain a core processing unit (13) in a reset state** (lines 1-5 of column 6 mentioned that the processor 31 is entered and maintained in reset state by asserting HRESET through a hardware/software reset. In addition, lines 9-11 of column 3 mention that the releasing of the suspended processor from reset includes host accessing an address. Thus, the core processing system is maintained in a reset state during power up until released by the host) **during power up of the core processing circuit** (lines 4-6 of column 3 mention that the resetting comprises asserting power-on reset signal. In addition, lines 39-43 of column 7 mention that the reset is asserted during power up of the PCMCIA card. Thus, host maintains the core processing circuit in a reset state during power up of the core processing circuit)
- **and loading instructions from a system memory of a host processing system to one or more registers at a boot address associated with the core processing circuit** (column 6, lines 5-15 in view of column 8, lines 7-9*, Anderson discloses the "initial program" comprising boot code sequences loaded in the core processing circuit, which must necessarily be loaded to registers. In addition, 115 of Fig 5 shows that the host loads the program to the memory of

core. Thus, Anderson discloses loading instructions from a system memory of a host processing system to one or more registers at a boot address associated with the core processing circuit), **the instructions comprising one or more instructions to initialize the core processing circuit upon release of the core processing circuit from the reset state** (lines 5-12 of column 6 mention that the START* by host causes the latch output 61 high, which in turn causes the processor to leave the reset state. These operations are shown in step 117 and 119 in Fig 5. After setting the flip-flop, processor begins booting or initialization as shown in step 121 of Fig 5. Thus, the instructions initialize the core processing circuit upon release of the core processing circuit from the reset state).

Regarding claim 23, Anderson **discloses the method comprising loading the reset vector to a boot address in the registers** (column 6, lines 13-15 in view of column 8, lines 7-9; Anderson discloses the reset vector as an "initial program" comprising boot sequences which necessarily must be loaded to registers at a boot location) **are formed in a memory (39) coupled to the core processing circuit (31) through a data bus (26).**

Regarding claim 24, Anderson discloses **the host processing system further comprises logic to set an address translation unit to fetch instructions from the**

Art Unit: 2116

system memory in response to requests from the core processing unit (column 2, lines 48-50, via processor address bus 24).

Regarding claim 25, Anderson discloses **the host processing system further comprises logic to initiate one or more write bus transactions** (lines 7-9 of column 8 mention that the host transfers boot code sequence into the memory. Thus, host initiates the write bus transactions) **to load the reset vector in the registers while the core processing circuit is in the reset state** (column 6, lines 5-7). Anderson does not explicitly disclose initiating of one or more write bus transactions at an address translation unit addressed to the system memory, however said transactions would necessarily have to be present in order for the host processing system to properly communicate with the core processing circuit.

Regarding claim 26, Anderson discloses **the host processing system further comprises logic to release the core processing circuit from the reset state in response to loading the reset vector at the boot address** (column 2, lines 37-39 and lines 5-11 of column 6).

Regarding claim 29, Anderson discloses an article comprising:

- **a storage medium comprising machine-readable instructions encoded there on for** (there must be a storage media to store the instructions necessary to execute the disclosed methods of Anderson):

- **having a host processing system (11) maintain a core processing unit (13) in a reset state** (lines 1-5 of column 6 mentioned that the processor 31 is entered and maintained in reset state by asserting HRESET through a hardware/software reset. In addition, lines 9-11 of column 3 mention that the releasing of the suspended processor from reset includes host accessing an address. Thus, the core processing system is maintained in a reset state during power up until released by the host) **during power up of the core processing circuit** (lines 4-6 of column 3 mention that the resetting comprises asserting power-on reset signal. In addition, lines 39-43 of column 7 mention that the reset is asserted during power up of the PCMCIA card. Thus, host maintains the core processing circuit in a reset state during power up of the core processing circuit)
- **and loading instructions from a system memory of a host processing system to one or more registers at a boot address associated with the core processing circuit** (column 6, lines 5-15 in view of column 8, lines 7-9*, Anderson discloses the "initial program" comprising boot code sequences loaded in the core processing circuit, which must necessarily be loaded to registers. In addition, 115 of Fig 5 shows that the host loads the program to the memory of core. Thus, Anderson discloses loading instructions from a system memory of a host processing system to one or more registers at a boot address associated with the core processing circuit), **the instructions comprising one or more**

instructions to initialize the core processing circuit upon release of the core processing circuit from the reset state (lines 5-12 of column 6 mention that the START* by host causes the latch output 61 high, which in turn causes the processor to leave the reset state. These operations are shown in step 117 and 119 in Fig 5. After setting the flip-flop, processor begins booting or initialization as shown in step 121 of Fig 5. Thus, the instructions initialize the core processing circuit upon release of the core processing circuit from the reset state).

Regarding claim 30, Anderson discloses that **the method further comprises transmitting the instructions from the system memory** (lines 66-67 of column 2 mention that the PCMCIA downloads code from host) **through a host bridge (17) of the host processing system (11).**

Regarding claim 31, Anderson discloses **the method further comprising releasing the core processing circuit from the reset state in response to loading the instructions at the boot address** (column 6, lines 5-12 mention that the processor leaves reset state after the memory is loaded with boot code. In addition, lines 38-39 of column 2 mention that boot logic is configured to release the suspended processor. Thus, the releasing of processor from the reset state is in response to loading the instructions at the boot address).

Art Unit: 2116

Regarding claim 32, Anderson discloses the method further comprising **loading the instructions to a boot address** (lines 10-15 of column 6) **in registers formed in a memory (39) coupled to the core processing circuit (31) through a data bus (26).**

Regarding claim 33, Anderson discloses **the method further comprises setting an address translation unit to fetch instructions from the system memory in response to requests from the core processing circuit** (column 2, lines 48-50, via processor address bus 24).

Claim Rejections - 35 USC § 103

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

5. Claims 7, 13, 20, 27, and 34 rejected under 35 U.S.C. 103(a) as being unpatentable over Anderson (U.S. 5,898,869).

Regarding claims 7, 13, 20, 27, and 34, Anderson discloses all of the limitations of respective independent claims 1, 9, 15, 22, and 29, as noted above. However, though Anderson discloses the additional instructions comprising "diagnostic routines" (column 3, lines 13-14), Anderson does not explicitly disclose the system wherein the additional instructions comprise instructions to commence a power-on self test procedure. The

Art Unit: 2116

examiner takes Official Notice that power-on self test procedures are a well known type of diagnostic routine. It would have been obvious at the time that the invention was made to use power-on self test procedures for the diagnostic routines disclosed by Anderson.

The motivation for doing so would have been to assure the integrity of the information stored on the core processing circuit.

6. Claims 8, 14, 21, 28, and 35 rejected under 35 U.S.C. 103(a) as being unpatentable over Anderson (U.S. 5,898,869) in view of Klein (U.S. 6,216,224).

Regarding claims 8, 14, 21, 28 and 35, Anderson discloses the limitations of respective parent claims 7, 13, 20 27 and 34 as noted above.

However, Anderson does not disclose the method wherein the additional instructions further comprise instructions to launch an operating system to the core processing circuit.

Klein teaches the method wherein the (additional) instructions further comprise instructions to launch an operating system to the core processing circuit (column 4, lines 13-15) in order to "bring the PC up to a state that can be used by a human operator" (page 2, column 4, lines 16-17). It would have been obvious to one of ordinary

skill in the art at the time of invention to incorporate Klein's teachings of loading the operating system with Anderson's disclosure of a system comprising a core processing circuit initialization with a host processing system. The motivation for doing so would have been to accommodate for the use of the system by a human operator.

Response to Arguments

Applicant's arguments with respect to claims 1-35 have been considered but are moot in view of the new grounds of rejection.

With regards to the assertions of Anderson's failure to disclose element (b1) of applicants' claim 1, "[the host processing system comprising] logic to maintain the core processing circuit in a reset state during power up of the core processing circuit", element (a) of applicants' claims 9 and 15 namely "having a host processing system maintain a core processing circuit in a reset state during power up of the core processing circuit", element (b) of applicants' claim 22 and 29, namely "having a host processing system maintain a core processing circuit in a reset state during power up of the core processing circuit", the Examiner directs Applicants to Anderson's line 6 of column 3, which discloses that the reset signal may be power-on reset. Thus, the reset signal resets the PCMCIA during power up. In addition, Fig 2 shows that the host reset line 25b causes HRESET to be asserted, which is a part of PCMCIA interface 17 and hence, is a part of host (lines 14-15 of column 4). In addition, lines 5-15 of column 6 mention that assertion of HRESET causes the flip-flop 55 to lower its Q output, which in

Art Unit: 2116

turn causes the processor 31 to enter a reset state. The processor maintains the reset state until access by host causes assertion of START line, which in turn causes Q output to high and processor leaving the reset state. Therefore, the host processing system 11 comprises logic (25b, HRESET*, CS0) to maintain the core processing circuit 13 in a reset state during power up of the core processing circuit, as claimed by applicant's independent claims 1, 9, 15, 22 and 29. Thus, Anderson is a proper basis for a 35 U.S.C 102(b) rejection.

Accordingly, Applicants' assertions concerning the rejections of dependent claims 2-8, 10-14, 16-21, 23-28 and 30-35 are invalid, as the rejections of their respective independent claims 1, 9, 15, 22 and 29 are proper.

Further, Applicants' assertions concerning the rejections of dependent claims 7, 13, 20, 27 and 34 under 35 U.S.C. 103(a), based on the teachings of Anderson, are invalid, as the rejections of their respective independent claims 1, 9, 15, 22, and 29 are proper.

Finally, Applicants' assertions concerning the rejections of dependent claims 8, 14, 21, 28, and 35 under 35 U.S.C. 103(a), based on the combined teachings of Anderson and Klein, are invalid, as the rejections of their respective independent claims 1, 9, 15, 22 and 29 are proper.

Conclusion

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Fahmida Rahman whose telephone number is 571-272-8159. The examiner can normally be reached on Monday through Friday 8:30 - 5:30.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Lynne Browne can be reached on 571-272-3670. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

Fahmida Rahman
Examiner
Art Unit 2116


LYNNE H. BROWNE
SUPERVISORY PATENT EXAMINER
TECHNOLOGY CENTER 2100